

Remarks

This response is being submitted within one month after the statutory period set for responding to the office action mailed on April 22, 2003. Therefore a petition and fee for an extension of time are enclosed.

Hereinafter, the claims that are pending prior to the entry of the amendments in this response are called "currently pending claims." This response amends currently pending claims 1 and 3-7. Please cancel currently pending claim 8 without prejudice or disclaimer. Please add new claims 9-23. Upon amendment, the above-identified US patent application will have 1 independent claims (amended claim 1) and a total of 22 claims (currently pending claim 2, amended claims 1 and 3-7 and new claims 9-23). Applicants have previously paid for 20 total claims and 3 independent claims. Therefore, an excess claim fee for two dependent claims is filed with this response.

The amendments in currently pending claims 1-8 are made to address the Examiner's rejection according to 35 U.S.C. §112, second paragraph as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicants regard as the invention.

Re: claim 1.

The abbreviation SEBS has been replaced by the expression styrene-butadiene block copolymer. The support can be found inter alia on page 2, lines 29-32. This expression has also been incorporated in currently pending claims 3, 4, 5, 6 and 7.

Re claim 3

The support for the expression weight % can be found inter alia on page 6, lines 27-31 and Table 2.

Re: claim 4.

The amendment of claim 1 should now present an antecedent basis for the limitation in claim 4.

Re: claim 5.

The amended claim 1 should now present an antecedent basis for this limitation in claim 5. The support for the expression weight % can be found inter alia on page 6, lines 27-31 and Table 2.

Re: claim 6.

The support for the expression weight % can be found inter alia on page 6, lines 27-31 and Table 2.

Re: claim 7.

The amended claim 1 should now present an antecedent basis for this limitation in claim 7.

Re: Claim 8.

Claim 8 has been canceled.

New claims.

New independent claim 9 recites a method for producing a stable composition for cables. The base for the process claim 9 can be found inter alia on page 3, lines 1-17 and example 1 on page 6 of the specification. New claims 10-14 are dependent from claim 9. The limitations of claims 10-11 and 12-14 correspond to the limitations of claims 2-3 and 5-7.

Claim 8 has been rewritten as a method claim 15. Claim 15 should now be a proper

process claim under 35 U.S.C. §101. New claims 16-23 refer to dependent claims 2-7 and to new claim 15.

Claim rejection under 35 U.S.C. 103(a).

The Examiner rejects currently pending claims 1-8 under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,844,021, hereinafter called "Koblitz," on page 3 of the office action. The Examiner asserts that Koblitz discloses a sealant composition comprising a thermo-plastic polymer and an extender. See column 5, lines 34-39. The composition may be used as cable filling material. See column 2, lines 62-64. The preferred extender is mineral oil. See column 16, line 52. The polymeric material is described at column 12, lines 40 through column 13, line 52. The Examiner further asserts that the polymeric material may have a radial structure and may be a hydrogenated styrene block polymer material. The Examiner finally asserts that it would be obvious to use a composition comprising the claimed components as a cable filler because the prior art teaching compositions comprising those same components may be used as a cable filler. The Applicants respectfully traverse the Examiner's assertion.

The amended claim 1 has the following limitations:

- a stable composition for cables filling comprising
- a mineral or synthetic oil and
- a radial hydrogenated styrene-butadiene block copolymer.

New claims 9 and 15 have the same claim limitations.

Prima facie case of obviousness.

To establish a prima facie case of obviousness, three criteria must be met according to Manual of Patent Examining Procedure (MPEP) 2142.

-First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art to

modify the reference or to combine reference teachings.

-Second, there must be a reasonable expectation of success if the references are combined.

-Finally, the prior art reference or combined with other prior art references must teach or suggest all the claim limitations.

Koblitz does not teach or suggest all the claim limitations. Koblitz does not teach the radial hydrogenated styrene-butadiene block copolymer and does not teach a composition of mineral or synthetic oil and a radial hydrogenated styrene-butadiene block copolymer. Koblitz teaches a sealant composition and sealed electrical connectors. Even if Koblitz teaches that a sealant can be used as telephone cable filling applications, Koblitz does not teach or suggest to use radial block copolymers such as styrene copolymers in a stable composition for cables filling.

There is no suggestion or motivation in Koblitz of radial hydrogenated styrene-butadiene block copolymers to make a stable composition of cable fillings. Finally, there would be no expectation of success by modifying Koblitz since the person skilled in the art would be motivated to select a composite of primary and secondary elastomeric thermo-plastic polymers. See column 11, line 50 to column 12, line 22. Therefore, a physical mixture of block polymers with concrete physical properties in a particular polymer ratio. See column 12, lines 55-90.

As stated above, the three criteria to establish a prima facie case of obviousness are not met by the teaching of Koblitz. It is believed that independent claim 1 is allowable and dependent claims 2-7 and 9-21 are allowable as well in view of Koblitz.

The Examiner rejects currently pending claims 1-3 and 5-8 under 35 U.S.C. 103(a) as being unpatentable over US Patent No. 4,351,913, hereinafter called "Patel," and in view of US Patent No. 4,176,240, hereinafter called "Sabia," combined with US Patent No. 5,358,664 hereinafter called "Brauer," on page 4 of the official action.

The Examiner asserts that both Patel and Sabia teach a composition used as a cable

filling material comprising a styrene block copolymer, a mineral oil and polyethylene wax and that Brauer teaches radial styrene block copolymers which may be used in cable filler compositions. The Examiner further asserts that it would be obvious to one of ordinary skill in the art to use the radial styrene block copolymer of Brauer in the cable filler composition of Patel or Sabia because the substitution of art recognized equivalents as shown by Brauer would have been within the level of ordinary skill in the art. The Applicants respectfully traverse the Examiner's assertion.

The Applicants submit that Patel and Sabia both teach and suggest linear block copolymers. The Applicants further submit that it would not be within the level of a person of ordinary skill in the art to substitute a radial styrene block copolymer of Brauer in the cable filler composition of Patel or Sabia.

Re: Patel.

Patel teaches a composition of matter composed of a mixture consisting essentially of a styrene block copolymer rubber, mineral oil, and inorganic hollow microspheres. See claim 1. Patel teaches that this filling material has superior waterproofing, handling and low temperature flexibility properties. See column 3, lines 45-48. Patel does not teach or suggest any stable compositions for cables filling comprising a mineral or synthetic oil and a radial hydrogenated styrene-butadiene block copolymer.

Re: Sabia.

Sabia teaches a filling material between conductors, comprising napthenic oil, a styrene-ethylene butylene-styrene block copolymer and polyethylene. See claim 1. Sabia teaches that this composition shows improved handling characteristics. Moreover, the composition helps to isolate each wire and to splice to another wire since. The composition also improves the handling at low temperatures. See columns 2, lines 7-26. Sabia does not teach or suggest any stable compositions for cables filling comprising a mineral or synthetic oil and a radial hydrogenated styrene-butadiene block copolymer.

Re: Brauer.

Brauer teaches a gelled oil composition comprising an oil component, an aluminum soap complex and a bleed inhibitor. The bleed inhibitor comprises the combination of a synthetic oil and at least one styrene rubber block copolymer. See claim 1. Brauer teaches the use of the gelled oil composition in optical cables. See column 1, line 10. Brauer teaches that the gelled compositions have improved lubricant properties. Brauer does not teach or suggest a stable composition for cables filling comprising a mineral or synthetic oil and a radial hydrogenated styrene-butadiene block copolymer. Applicants submit that Patel or Sabia, even if combined with Brauer, do not teach or suggest all the claim limitations. Applicants further submit that Patel and Sabia do not teach or suggest radial hydrogenated styrene-butadiene block copolymers at all. Moreover, Brauer only teaches compositions with two bleed inhibitors and mixtures thereof.

Surprising Results by Using Radial Hydrogenated Styrene-Butadiene Block Copolymer

Applicants submit that there is no suggestion in Brauer that different copolymers are equivalent to each other. The examples of Brauer only teach compositions with two bleed inhibitors and mixtures thereof: polybutene 32 and Kraton G1710, which is a linear block copolymer.

Applicants further submit that the use of radial SEBS result in surprising and unexpected improvement in the stability of the cable filling composition. As it is shown in the Example's, the use of a radial SEBS instead of a linear copolymer renders significant more stable compositions. See Table 2 on page 9. This result can be seen from the values of the Drip-Test, which calculate the gel stability in time and at different temperatures.

Applicants compared the compositions of Test 1 and Test 3 with each other. The compositions 1 and 3 differ by the type of block copolymer used therein. The composition of Test 1 comprises a linear SEBS and the composition of Test 3 comprises a radial SEBS. The Drip-Test values at 70 C/24 h are 7.1 (Test 1) compared with 3.8 (Test

3). The comparison shows the surprising and unexpected improvement in the stability of the cable filling composition by the use of radial SEBS. This means that the dripping in test 1 is 186% higher than the dripping in test 3. The result is even more surprising and unexpected when the value 11.9 (Test 2) is compared with 3.9 (Test 4). This means that the dripping in test 2 is even 305% higher than the dripping in test 4.

Re: Combined teaching of Patel and Brauer.

Patel does not teach or suggest using compositions comprising styrene block copolymers and mineral or synthetic oil to stabilize composition for cables filling. There would be no motivation for the person skilled in the art to modify the teaching of Patel by combining it with the teaching of Brauer. Brauer teaches the use of radial block polymers of the formula (styrene rubber). Useful rubbers in those copolymers include also butadiene. See column 5, lines 14-17. Brauer teaches that the gelled compositions have improved lubricant properties. The person skilled in the art would have no reason to combine the teaching of Patel with the teaching of Brauer. There would be no expectation of success because the person skilled in the art would be motivated to improve the water-proofing properties of filling mixtures as disclosed by Patel and not to find stable composition for cables filling comprising a mineral or synthetic oil and a radial hydrogenated styrene-butadiene block copolymer. Brauer teaches away from Patel.

Re: The combined teachings of Sabia and Brauer.

Sabia teaches a composition comprising naphthenic or paraffinic oil and styrene-ethylene butylene-styrene block copolymer and polyethylene. See column 2, lines 29-46. There would be no motivation for the person skilled in the art to combine the teaching of Sabia with the teaching of Brauer. Neither Sabia nor Brauer suggest using mixtures of mineral or synthetic oil and styrene block copolymer in order to stabilize compositions for cables filling. A person skilled in the art would have absolutely no reason to combine the teachings of Sabia and Brauer. Furthermore, a person skilled in the art would have no reason to incorporate radial block polymers of the formula (styrene

rubber) which can include butadiene as taught by Brauer into the teaching of Sabia, since the two documents teach away from each other, because Sabia teaches a composition comprising styrene-ethylene butylene-styrene block copolymer to improve handling characteristics for cables and Brauer teaches gelled oil compositions for use in optical cables and that the compositions have improved lubricant properties. Therefore, Sabia and Brauer teach away from each other.

As stated above, the three criteria to establish a prima facie case of obviousness are not met by combining the teachings of Patel with Brauer or of Sabia with Brauer. Clearly, the Examiner has combined these two references based on a hindsight reconstruction of the Applicants' claims. Therefore, the motivation or suggestion to combine the references is based on the Applicants' own disclosure.

Hence, the Applicants submit that the rejection of amended claim 1 under 35 U.S.C. §103(a) as being unpatentable over Koblitz or over Patel in view of Brauer or Sabia in view of Brauer is improper. Applicants respectfully request that the rejection of amended claim 1 on grounds be withdrawn.

If the Examiner rejects amended claim 1, currently pending claim 2, amended claims 3-7 and new claims 9-23 on prior-art grounds, the Applicant respectfully requests that the Examiner show how the references teach or suggest every element of the rejected claims and where the motivation for making the suggested combination can be found in the cited references. It is believed that independent claim 1 is allowable; and, therefore, dependent claims 2-7 and 9-23 are allowable as well.

Accordingly, reconsideration and examination of the present application is respectfully requested.

The application is now in condition for allowance. Allowance of the application at an early date is respectfully requested.

The Applicants reserve the right to seek protection for any unclaimed subject matter,

either subsequently in the prosecution of the present case or in a divisional or continuation application.

This response amends currently pending claims 1 and 3-7, cancels currently pending claim 8 and adds new claims 9-23. The amendments, cancellation, and additions that are described in the preceding sentence were done to more fully claim the invention and were not done to overcome the prior art, to overcome rejections under 35 U.S.C. 112, or to overcome any other rejections or objections. The amendments, cancellation, and additions that are described in the first sentence of this paragraph shall not be considered necessary to overcome the prior art, shall not be considered necessary to overcome rejections under 35 U.S.C. 112, and shall not be considered necessary to overcome any other rejections or objections.

The Commissioner is authorized to charge any additional fees which may be required or credit overpayment to deposit account no. 12-0415. In particular, if this response is not timely filed, then the Commissioner is authorized to treat this response as including a petition to extend the time period pursuant to 37 CFR 1.136 (a) requesting an extension of time of the number of months necessary to make this response timely filed and the petition fee due in connection therewith may be charged to deposit account no. 12-0415.

I hereby certify that this correspondence is being deposited with the United States Post Office with sufficient postage as first class mail in an envelope addressed to Commissioner for Patents

POB 1450, Alexandria, VA 22313-1450 on

August 22, 2003

(Date of Deposit)

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(Name of Person Signing)

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August 22, 2003

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Respectfully submitted,



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